

**PLAINTIFFS' EXHIBIT 73**

**REDACTED VERSION OF DOCUMENT SOUGHT  
TO BE FILED UNDER SEAL**

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HIGHLY CONFIDENTIAL—ATTORNEYS' EYES ONLY

April 11, 2022

VIA JAMS ACCESS

Special Master Daniel B. Garrie  
DGarrie@jamsadr.com

Re: *In re Facebook Consumer Privacy User Profile Litigation*, JAMS Ref No.  
1200058674

Dear Special Master Garrie,

Pursuant to Order Following March 9, 2022 Hearing Regarding Plaintiffs' Motion To Compel Production of Plaintiff Data dated March 22, 2022, we submit this response on behalf of Facebook. We also thank the Special Master for granting an extension of our time to respond due to a medical condition on our team, as well as Plaintiffs for agreeing to our request for an extension.

**Hive**

1. How does ad impression and ad click data for Facebook users get into Hive?

**Answer:** Ad impression and ad click data are received by Facebook servers through a HTTP web request from a user's web browser or the Facebook app installed on the user's device.

2. What tables store ad impression and ad click data for Facebook users?

**Answer:** The following Hive tables store ad impression and ad click data:

- [REDACTED]
- [REDACTED]

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3. What data pipelines are used to analyze ad impressions and ad click data for Facebook users? Where is the final output of these data pipelines stored (e.g. Hive table names, TAO, etc.)?

**Answer:** Based on a reasonable investigation, we attach as **Exhibit A** a list of data pipelines used to analyze ad impression and ad click data for which we believe output is stored in Hive.

4. Identify a list of Hive tables containing columns that store a UID, RID, SID, ASID, or other means of identifying a Facebook user. The list is to include tables that were active during the relevant time period.

**Answer:** Based on a reasonable investigation, we attach as **Exhibit B** a list of Hive tables that store user identifiers with data as it enters Hive. These tables were identified using tools that probabilistically identified them as containing user identifiers. The list does not include: (1) temporary, test, and error tables; (2) tables used to evaluate system performance; (3) tables that contain no data; (4) tables related to other Meta products (e.g., Oculus, Instagram, and WhatsApp); (5) tables used for infrastructure, operations, and product testing; and (6) tables believed to contain data that is either duplicative or transformed.

5. What is the estimated time and cost to produce data for the Named Plaintiffs from Hive?

**Answer:** Meta estimates that it would take approximately [REDACTED] or around [REDACTED] of computational cost to search across the entire Hive Data Warehouse and extract all the data about a single user.

### Ads Interests

1. How does Facebook determine ads interests for a user based on what the user views (i.e. are ad interests based on what the user views on Facebook or other Internet activity)?

**Answer:** Ads interests are derived from two types of on-platform activity: (1) [REDACTED] and (2) [REDACTED]. [REDACTED]

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2. Does Facebook track user activity across the Internet using cookies? If so, what cookies does Facebook use? Provide a statement explaining the use of cookies in tracking user activity on and off the Facebook platform to create behavioral data about users. Provide documentation on the use of fbp, fbc, and DATR cookies. Explain whether the scope of tracking user activity includes on or off platform activity, or both.

**Answer:** Facebook does not track user activity across the internet. Facebook receives data about a user's off-platform activity from advertisers who choose to integrate Facebook Business Tools, such as Facebook Pixel, which in turn rely on web technologies like cookies.

Facebook uses browser and user cookies (on and off-platform).

*Browser cookies* used to identify the browser:

- DATR: The DATR cookie identifies a web browser and is generally used for safety and security purposes.
- \_fbp: The \_fbp cookie is set on the third party domain only if the advertiser/publisher has installed the Facebook Pixel business tool and opted into the use of these cookies. The cookie has a browser identifier, and the epoch time when the cookie was created. For documentation on the \_fbp and \_fbc cookies, please see <https://developers.facebook.com/docs/marketing-api/conversions-api/parameters/fbp-and-fbc/>
- fr: The fr cookie is used for advertising purposes

*User cookies* used to identify a Facebook user:

- \_fbc: The \_fbc cookie is a cookie set on the third party domain only if the advertiser/publisher has installed the Facebook Pixel business tool. It is only set if the click originated from the Facebook services (e.g., when clicking on an ad on Facebook news feed). The \_fbc cookie contains an encrypted user id.
- xs/c\_user: The xs/c\_user cookies are used to identify if a user is logged into the Facebook platform.

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3. How are ads interests associated with a particular user? Where is ads interests data for individual users stored? Facebook is to describe whether ad interests data can be associated with a specific user via UID, RID, SID, ASID, or other means and whether it is included in the DYI file.

**Answer:** Ads interests are associated with a particular user via UID. Ads interests data for individual users are stored in [REDACTED]. They are also available in DYI and Ads Settings.

4. What is the estimated time and cost to produce ad interests data for the Named Plaintiffs?

**Answer:** Ads interests for the Named Plaintiffs are in the DYI file.

### Contracts

1. Is the data referenced in the contracts with [REDACTED] Microsoft, and/or [REDACTED] that Facebook provided to Special Master Garrie for *in camera* review in connection with the Named Plaintiff Data hearings included in the DYI file? If not, Facebook is to specify what data is not included and where such data stored.

**Answer:** Based on a reasonable investigation to date, the list attached as **Exhibit C** identifies user data in the contracts submitted to Special Master Garrie for *in camera* review and (1) whether it is included in the DYI file, and (2) if it is not included in the DYI file, the most likely location of that data. Upon further review of the contracts submitted, we note that many do not actually relate to user data, and many are a decade or more old and relate to products that were deprecated long ago.

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Sincerely,

A handwritten signature in cursive script that reads "Rosemarie Ring". The ink is dark and the signature is fluid.

Rosemarie T. Ring

# Exhibit A

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# Exhibit B

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# Exhibit C

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USER DATA TYPE	LOCATION	CONTRACTS
Photos	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Myphone (10/27/09) Microsoft Application Development Amendment (1/7/10) Microsoft Mobile App Submission, Windows 7 Mango (7/5/11) Microsoft Mobile App Submission, Windows 8 (9/27/12) Microsoft Mobile App Submission, Windows 8 (2/27/15)
Names	DYI	Microsoft Application Development Amendment (1/7/10)
Make a friend request	DYI	Microsoft Application Development Amendment (1/7/10)
User ID	DYI	Microsoft Feed Integration Agreement (+Amendment 1) (11/11/08): Microsoft Limited Data Sharing Agreement (8/23/10) Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
User name	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14); Microsoft Limited Data Sharing Agreement (8/23/10)
Timestamp of update	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
Status update text	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
Shared link	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
Timestamp of when like performed	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
Any like for the user	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
Type of like action and URL being liked	DYI	Microsoft Bing Search on Facebook Service and Platform Agreement, Amendment 6 (12/23/14)
User login data	DYI	Microsoft Collaboration Evaluation Agreement (5/11/09)
IP address used for login	DYI	Microsoft Collaboration Evaluation Agreement (5/11/09)
Timestamp of login event	DYI	Microsoft Collaboration Evaluation Agreement (5/11/09)
User ID and timestamp of when a change occurred to user profile	DYI	Microsoft Limited Data Sharing Agreement (8/23/10):
User profile picture URL	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Work history (contains employer)	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Education (contains school)	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Interest	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Movies	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Books	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Music	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Activities	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Gender	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Location	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Hometown	DYI	Microsoft Limited Data Sharing Agreement (8/23/10)
Most recent stories	DYI	Microsoft Mobile App Submission, Windows 7 Mango (7/5/11)
Online albums	DYI	Microsoft Mobile App Submission, Windows 7 Mango (7/5/11)
Events	DYI	Microsoft Mobile App Submission, Windows 7 Mango (7/5/11) Microsoft Mobile App Submission, Windows 8 (9/27/12) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13)
Upload photos and videos	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Windows 7 Mango (7/5/11) Microsoft Mobile App Submission, Windows 8 (9/27/12) Microsoft Mobile App Submission, Windows 8 (2/27/15) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13)
Comment on feed stories	DYI	Microsoft Mobile App Submission, Windows 7 Mango (7/5/11)
View and create tags on FB photos, and respond to Facebook events	DYI	Microsoft Mobile App Submission, Windows 7 Mango (7/5/11)
Offline messages	DYI	Microsoft Mobile App Submission, Windows 8 (9/27/12)
Friends	DYI	Microsoft Mobile App Submission, Windows 8 (9/27/12); Microsoft Limited Data Sharing
Stories	DYI	Microsoft Mobile App Submission, Windows 8 (9/27/12)
Status updates (Posts)	DYI	Microsoft Mobile App Submission, Windows 8 (9/27/12)
Facebook Places (Your Places)	DYI	Microsoft Mobile App Submission, Windows 8 (9/27/12)
Email	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13) Microsoft Mobile App Submission, Windows 8 (2/27/15)
Contacts	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13)
Update status	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13) Microsoft Mobile App Submission, Windows 8 (2/27/15)
Facebook home page	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13) Microsoft Mobile App Submission, Windows 8 (2/27/15)
Profile page	DYI	Microsoft Mobile App Submission, Windows Phone Facebook App (4/7/09) Microsoft Mobile App Submission, Facebook app for Windows Phone (6/5/13) Microsoft Mobile App Submission, Windows 8 (2/27/15)
“Content that a given Facebook user or page sets as being viewable by everyone”	DYI	Microsoft RealTime Data Licensing Agreement (10/20/09)
Privacy settings	TAO and Hive	Microsoft Limited Data Sharing Agreement (8/23/10)
Set permissions (audience controls on a post)	TAO	Microsoft Mobile App Submission, Windows 8 (9/27/12)